



Leading the Way: Profile of an Early DMS Deployer Manny Agah and the Arizona DOT

Arizona is a big state, with even bigger plans for its variable message signs (VMSs) program. With only 6,200 miles of state highway system, what Arizona lacks in number of highway miles, it more than makes up in deploying leading-edge technology. Nine years ago, the Arizona Department of Transportation (ADOT) was the first state to prepare a procurement contract for VMSs. So when the time came for ADOT to purchase new signs, Arizona looked to the future again. Manny Agah, Manager of the Traffic Operations Center for ADOT, will tell about his experiences using DMS standards.



What convinced you to make the decision to use ITS standards when deploying your DMS devices?

We went with standards for two reasons:

compatibility and interoperability. We wanted compatibility between our central software system and our field devices, and we wanted to be able to “plug-and-play” signs from different manufacturers. To get to this point, we had to use open DMS standards. We also wanted to reduce our costs. We plan to install about 140 signs in both our rural and urban areas over the next few years, and we wanted to get the best price possible. If we went with a proprietary system, we’d end up dealing with one vendor offering one price, and that wouldn’t give us much flexibility. By deploying standards, we can use any vendor that produces NTCIP-compliant signs. Standards give us more options with pricing and vendor selection. We’re fortunate. The vendor we’ve been working with has been very responsive to our needs.

We’re saving 20% on the cost of our variable message signs. DMS standards have saved us money.

-Manny Agah

Did you have to convince others in your agency that standards were a good idea?

No. We’ve always thought standards were the way to go. As I mentioned, we’re planning a pretty large deployment of VMSs, especially in our rural areas, over the next several years. We needed technology that would facilitate that deployment, so we chose DMS standards. By deploying signs based on NTCIP standards, we’ll be able to use a common workstation for all of our signs.

Tell me about your experiences working with DMS standards. What aspects are particularly positive or negative?

The most positive aspect of working with DMS standards is compatibility between our central management software and the manufacturers’ signs. We will have fewer compatibility issues using DMS standards. As long as we deploy signs that are NTCIP-compliant, they’ll be compatible with our central software. This makes the installation of new VMSs a lot easier and more routine, and it will allow future flexibility when the entire ITS infrastructure is taken into account.

There have been a few negatives associated with the DMS standards. We have been spending some time retrofitting our old VMSs to make them NTCIP-compliant. Once you go down the standards path, you have to be vigilant with vendors. Vendors are also learning how to work with standards. So we learned it was

important that we test our signs with the NTCIP Exerciser to make sure that the vendor is meeting our requirements. This takes time and effort but it's a good habit to get into.

Another negative aspect of using DMS standards was that I had to add an entire chapter to our VMS procurement RFP to specifically address our DMS standards requirements. We were lucky to hire a competent consultant to help us with the NTCIP portion of the RFP. I found out that many ITS consultants don't know enough about the NTCIP and DMS standards, so it's important to find one who is knowledgeable in this area.

The one last negative I should mention is that because we communicate with our rural signs through telephone lines and because the data packets that are part of the NTCIP protocols are large, we may experience longer transmission time, and thus more long-distance costs. This cost doesn't outweigh the advantages of using the standards, but it is a consideration and something people should be aware of.

What was staff's biggest challenge in working with DMS standards? How did your agency address those challenges?

We had to use an ITS consultant because we didn't have anyone on staff who was knowledgeable enough to work with the standards. For us, it just wasn't realistic to develop the in-house expertise necessary for us to deploy DMS standards on our own. We still rely on consultants, and these relationships work for us.

Did ITS activities at other regional transportation agencies weigh into your decision to use DMS standards?

Not really. As a state agency, we've taken the lead with DMS deployment. We've also been influenced by our participation in the ENTERPRISE Program, which was instrumental in getting us involved in DMS standards and the testing of NTCIP-compliant signs.

What benefits do you anticipate from your decision to use DMS standards?

Costs, vendor selection, and interoperability. We're saving 20% on the cost of our VMSs, and if we need to switch vendors, we have more vendors to choose from and more price options. We can look for the best deal. DMS standards have saved us money.

Have you received feedback from your customers related to your VMSs?

We've had VMSs for a long time now, so our customers are used to them and rely on the information they receive from them. We're excited about our plans to expand our network of VMSs throughout the state to serve the motoring public.

For your colleagues who might be on the fence about using ITS standards, what is the strongest argument you can think of for using standards sooner rather than later?

Why wait? The standards are here and they can help save time, money, and effort. The longer you wait, the more likely it is you'll get stuck with a proprietary system.

Manny Agah

- In 2000 promoted to Manager of the Traffic Operations Center
- Formerly ITS Manager, in charge of all ITS projects in Arizona
- In his 17th year with the Arizona DOT



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